DOCUMENT RESUME

ED 353 297 TM 019 349

AUTHOR Crawford, A. E., II
TITLE UNO ACT Class Profile, 1989-90 [and] 1990-91.
INSTITUTION Nebraska Univ., Omaha. Educational and Student Services.
PUB DATE 91
NOTE 10p.
AVAILABLE FROM University of Nebraska at Omaha (UNO), Educational and Student Services, 60th and Doge Streets, Omaha, NE 68182-0299.
PUB TYPE Collected Works - Serials (022)
JOURNAL CIT ESS Reports; v3 n1 Apr 1990 v4 n1 May 1991

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Achievement Tests; College Entrance Examinations; *College Freshmen; English; Higher Education; Mathematics Tests; National Programs; Natural Sciences; *Predictive Measurement; *Profiles; Research Reports; Scores; Social Studies; *Student Characteristics; Student Evaluation; Testing Programs; Test Results
IDENTIFIERS *American College Testing Program; Composite Scores; *University of Nebraska Omaha

ABSTRACT

The report "UNO Act Class Profile, 1989-90" in the first of two serial issues presents salient parts of data from "The Class Profile Report" of the American College Testing (ACT) Corporation, which provides detailed information concerning the academic past of 1,359 freshmen entering the University of Nebraska at Omaha (UNO) in the fall of 1989, their family backgrounds, past achievements, and goals and aspirations for the future. The ACT Assessment provides test results in four areas (English, mathematics, social sciences, and natural sciences). This report provides one figure and describes support expectations. These freshmen were interested in advanced placement programs and credit by examination, and they required academic support services. The UNO participates in two data producing and analysis programs annually based on the Student Assessment Program of the ACT Corporation. The "ACT Class Profile, 1990-91" in the second of two serial issues provides data on 1,399 freshman entering the UNO in the fall of 1990 and their initial academic efforts at the university. The two reports provide information that is supportive and related in time; the class profile data group of 1 year produces the Prediction Research group of the next year. Caution must be exercised in the use of ACT scores to predict the grades of students enrolling in the UNO. Overall, the UNO entering freshmen classes for the fall of 1989 semester and the fall of 1990 each were diverse groups with academic and personal characteristics that were much in line with those expected from UNO students over the years. (RLC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED353295

UNO ACT Class Profile, 1989-90.

UNO ACT Class Profile, 1990-91

E S S REPORTS

VOL III No. 1 April 1990

VOL IV No. 1 May 1991

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Alfred E. Crawford
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

TM019349

BEST COPY AVAILABLE

Vol. III No. 1 April, 1990

UNO ACT CLASS PROFILE, 1989-90

by A. E. Crawford II

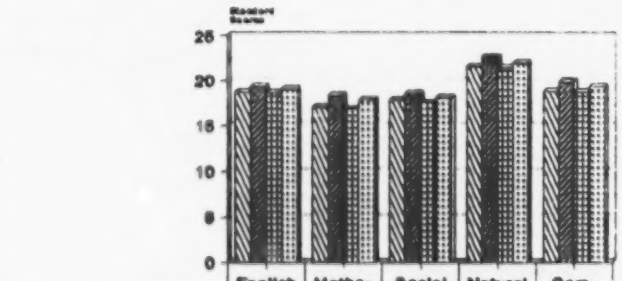
New freshmen applications to the University of Nebraska at Omaha (UNO) totaled 2,566 for the Fall Semester 1989. Of that number, 1,756 (68%) subsequently enrolled for courses at UNO. American College Testing Corporation (ACT) data was available for 1,359 (77.4%) of those new freshmen. Annually, ACT uses test results and other student-supplied information to produce a document, **The Class Profile Report,** for each institution which uses the ACT Research Service. That report provides detailed information concerning the academic past of those students, their family background, past achievements, and goals and aspirations for the future. This *ESS Report* is designed to present salient parts of that data to the UNO community. The full report has been made available to the Dean of each college and may also be obtained from the Office of Student Development Services.

Academic — The ACT Assessment provides test results in four areas: English, Mathematics, Social Sciences, and Natural Sciences. ACT standard scores range from a low of 01 to a high of 36 with an average of about 19. The ACT Composite Score is the arithmetic average of the four subtest scores. The average ACT Composite standard score for the new freshmen enrolling at UNO for the fall 1989 semester was 18.8. That score compared favorably to the average for freshmen enrolling in Master's degree granting institutions nationally. It was, however, below average for the national sample of all students who enrolled in universities for the fall 1989 semester. The UNO Composite ACT Score was also below the average for Nebraska high school graduates. Figure 1 depicts the ACT score distributions for those four groups of students. UNO ACT scores have not varied greatly over the past 12 years. The 12-year average composite score, 18.7, is in line with both state and national averages for that same period. At UNO, ACT sub-test scores have been highest in the Natural Sciences (21.5 in 1989; 21.2 as a 12-year average) while Mathematics sub-test scores have been the lowest (17.0 in 1989 and 17.4 for the 12-year average). Scores on the ACT English test were 18.7 and scores on the Social Science test were 17.8 for 1989 (the 12 year averages were 18.1 for English and 17.7 for Social Science).

ACT scores were highest for UNO students initially enrolling in the College of Engineering & Technology (21.4) followed by those declaring the Social Sciences and the Health Sciences as their majors (19.3). Undecided students had the lowest ACT Composite Scores (18.0). UNO does enroll its share of students who score well on the ACT. About 10% of the freshmen who enrolled at UNO had a Composite score of 26 or higher (90%ile). That percentage was below the national average for all enrolled students (15%) but was in line with the 11% figure for MA degree granting institutions. Further, over 26% of the students who enrolled at UNO for the fall 1989 semester had achieved an ACT Composite score at the 80th percentile or higher.

Over 30% of the new freshmen indicated that they were in the top quarter of their high school class. The ACT Composite score average for that group was 22.3 (versus 22.6 and 21.8, respectively, for the national sample and MA level institutions). The high school grade average for these freshmen was 2.74 (5 year average, 2.71) on a 4.0 scale while the national sample and MA level institutions averages were 2.94 and 2.89, respectively. Finally, over 40% of the new UNO freshmen indicated they had achieved high school grade averages of 3.00 or higher (4.0 scale) while only 7% of the group indicated high school grade averages that were below 2.0.

Figure 1
COMPARISON OF MEAN ACT SCORES, 1990



	English	Mathematics	Social Studies	Natural Sciences	Composite
UNO Enrolled Fresh	18.7	17	17.8	21.5	18.8
St. of NE Average	19.3	18.3	18.5	22.6	19.8
Nat'l MA Inst. Fresh	18.8	18.8	17.8	21.4	18.7
Nat'l Enr'd Fresh	19	17.8	18.1	21.9	19.3

Data sources
Source: ACT Class Profile Report, 1990 & the ACT High School Profile Report, 1989

General Background — Almost 50% of the UNO freshmen indicated they intended to obtain a Bachelor's degree. Another 41.6% of the students indicated they were seeking graduate or professional degrees. Only 3.1% of the freshmen who enrolled for the fall 1989 semester indicated degree aspirations of less than the Bachelor's

degree. A major in the College of Business Administration was preferred by 27.6% of the students followed by Arts and Sciences (12.1%) and Health Sciences (9.2%). Over 7% of the students indicated they were undecided about a choice of major field of study. A major in the college of Fine Arts, Engineering, Education, or Public Services, respectively, was chosen by between 5% and 6% of the freshmen.

Over 82% of the UNO students indicated a preference for attending a public college or university while only 11% indicated a desire to attend a private college. Thirty-one percent of these freshmen indicated a desire to attend a school with an enrollment of 10,000 while 28% wanted to attend a school under 5,000 enrollment. Millard North High School was the single largest feeder school for this freshmen class (n=101, 7.4%). The Omaha Public School District provided the greatest number of students of the area school districts (n=334, 24.6%); followed by the Millard School District (n=185, 13.6%) and the Omaha Catholic School District (n=181, 13.3%). Almost 9% of the freshmen came from Nebraska high schools outside of the four-county metropolitan area while 8% were from out-of-state high schools. UNO was the first or second choice college of 55% of these freshmen. Nationally, the percentage of first or second choice college for students who enrolled was 59% for all students and 62% for students enrolling in MA level institutions. Fifty-three percent of the freshmen who enrolled at UNO indicated that their preference was to attend a college within 25 miles of their present home.

Support Expectations — Over three-fourths of the entering freshmen indicated that they planned to apply for financial aid. Sixty-two percent stated that they expected to work while in college and wanted assistance finding employment. Of the new freshmen responding, 26% indicated that they would work 20 or more hours per week during their first year of college. Twelve percent indicated they would not work during their first year while 16% and 46%, respectively, indicated that they would work 1-10 and 11-20 hours each week during their freshman year.

Large numbers of the entering freshmen indicated a need for special assistance in academic support areas. Over 40% said they needed assistance in improving their study skills. The ACT Composite for that group was 18.0 — slightly lower than for the total group of freshmen. Additionally, 41% indicated a need for assistance with mathematical skills (ACT Composite 17.2) while 25% indicated special assistance needs in improving their reading speed and comprehension (ACT Composite 17.2) and with expressing ideas in writing (ACT Composite 17.8). Almost half (45%) indicated that they needed assistance with educational and occupational planning (ACT Composite 19.1). Finally, 13% indicated a special need for assistance with personal concerns. The percentages of UNO students expressing these special needs have remained constant over the past five years and are almost identical to special needs levels expressed by the national sample and by students at MA level institutions.

Several entering UNO freshmen expressed interest in advanced placement programs. Thirty-six percent expressed a desire to receive credit by examination in English, 32% in Social Sciences, 25% in Natural Sciences and 19% in Mathematics. The ACT score averages for those students were from 19.8 to 20.5. Additionally, 34% of the freshmen said that they were interested in independent study, 23% wanted to study in a foreign country, and 21% expressed an interest in freshmen honors courses. Finally, between 16% and 22% of the freshmen expressed interest in advanced placement in English, Mathematics, Social Studies, or Natural Sciences courses while 16% expressed interest in advanced placement in foreign language courses. The ACT score averages of these freshmen generally ran above that of the UNO freshmen average (19.3 to 21.7).

Conclusions — The UNO entering freshmen class for the fall 1989 semester was a diverse group that possessed academic and personal characteristics much in line with those we have come to expect from our students over the years. The drop in ACT composite score average from 1988-89 to 1989-90 (19.1 to 18.8) was slight and not of great concern. The fact that the UNO ACT Composite score was below that for Nebraska high school graduates clearly suggests that numbers of higher scoring freshmen matriculate at institutions other than UNO. The interest that these entering freshmen placed on advanced placement programs and credit by examination could be used by the appropriate academic departments in the recruitment of those students— especially as those interested appear to be students scoring above the UNO ACT average. The expressed needs for academic support services by the freshmen indicates the continued importance of university sponsored programs such as the Learning Center, the Reading Laboratory, and those of the College of Continuing Studies.

Recommendations —

1. Academic departments should be encouraged to develop early contact with those students scoring in the upper half (20+ standard score) of the ACT. Early contact with high scoring minority group students is especially important in light of significant competition for such students.

2. UNO should continue to develop retention strategies that include academic support services for students as well as programs to support part-time employment and other financial resource needs of students.

3. Further examination of students who send ACT scores to UNO but choose not to attend is needed. Of special interest are the large numbers who score 21-25 on the ACT (29% of non-enrolled). Many of these students might become transfer students for UNO at some later date.

References —

American College Testing Corporation (1990). **Class Profile Report, University of Nebraska at Omaha** Iowa City, IA: The American College Testing Corporation.

University of Nebraska at Omaha (1989, October). *"Applications for Fall Semester 1989, Final Report"*. Office of Admissions University of Nebraska at Omaha.

ESS Reports is published by the Division of Educational and Student Services, University of Nebraska at Omaha.

Delbert D. Weber, Chancellor

Richard E. Hoover, Vice Chancellor for Educational and Student Services

Joe L. Davis, Assistant Vice Chancellor for Educational and Student Services and Editor

University of Nebraska at Omaha

Educational and Student Services
University of Nebraska at Omaha

Vol. IV No. 1 March, 1991

UNO ACT CLASS PROFILE, 1990-91
and
PREDICTIVE RESEARCH REPORT

by A. E. Crawford II

The University of Nebraska at Omaha Participates in two data producing and analysis programs annually based on the Student Assessment Program of the American College Testing Corporation. The "ACT Class Profile" and the "Prediction Research Report" provide information that assists in understanding freshmen entering UNO and assessing their initial academic efforts at the university. The two reports, while different, produce information that is supportive and related in time — the class profile data group of one year produces the Prediction Research group of the next year. This edition of the *ESS REPORTS* summarizes the results of both ACT reports.

THE ACT CLASS PROFILE, 1990-91

There were 2,547 new freshman applications for admission to the University of Nebraska at Omaha for the Fall Semester, 1990. Of that number, 1,732 (68%) subsequently enrolled for courses at UNO. The American College Testing Corporation (ACT) reported that assessment data was available for 1,399 (80.8%) of those new freshmen; an increase of 3% over the previous year. Annually, ACT uses test results and other student supplied information to produce the **Class Profile Report** for each institution which uses the ACT research service. That report provides detailed information concerning the academic past and promise of those students, their family background, past achievements, and goals and aspirations for the future. This section of the ESS Report presents salient parts of that data to the university community.

Academic — The "Enhanced Act" assessment was implemented nationally beginning October, 1990. This instrument is a major redevelopment of the traditional ACT and was designed in response to changes in the secondary education curriculum. There are four subtests; English, Mathematics, Reading and Science Reasoning. The "Enhanced ACT" provides sub-scores in the first three test areas; (usage/mechanics and rhetorical skills for English; pre and elementary algebra, intermediate algebra and coordinate geometry, and plane geometry and trigonometry for Mathematics; and arts/literature and social studies/sciences for Reading. There are no sub-scores for the Science Reasoning test (Biology, Physical Sciences, Chemistry, Physics). Sub-test scores are provided for individual students in hard copy and on the Student Information System (see SIS Screen 221, ACT1, ACT2, or ACT3). Sub-test scores are not discussed in this *ESS Report*. The change to the "Enhanced ACT" has brought about the demise of the Social Science and Natural Science subtests. Those areas have been replaced with a Reading test and a Science Reasoning test. There were not sufficient students presenting "Enhanced ACT" scores for the present year to allow proper data development to occur in all areas. Scores for those sub-tests will become available for grouped data beginning next year. Data from the English and Mathematics tests and the Composite Score are presented for this year.

Standard scores for the "Enhanced ACT" range from a low of 01 to a high of 36 with a national average of 20.6 for high school graduates. The ACT Composite Score is the arithmetic average of the four sub-test scores. The average ACT Composite standard score for the new freshmen enrolling at UNO for the Fall Semester, 1990 was 20.7. That score compared favorably to the average for freshmen enrolling in comparable institutions nationally (Masters Degree granting). It was, however, below average for the national sample of students who enrolled in universities for the Fall Semester, 1990.

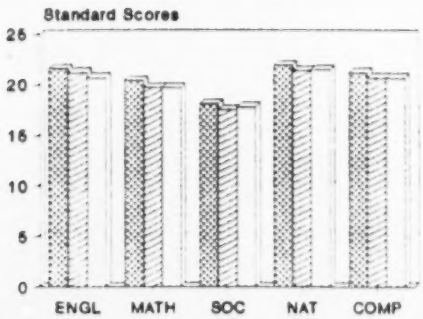
The UNO ACT English test was 20.7; somewhat below the national average. The Mathematics test score average for UNO students was 19.7; the same as the average for MA level institutions and slightly below the average scores produced by the national all student group. Distributions of the ACT scores for UNO students indicates that entering freshmen cluster in the

central score ranges: differing from the broader dispersion of scores for the state, regional, and national groups (ACT, 1991). Scores of UNO students in English and Mathematics are clearly clustered toward the higher end of the spectrum in contrast to the scores of the state, regional, and national groups which appear clustered in the reverse direction.

Students who planned to major in the Sciences (biological and physical) and Pre-Engineering at the time they completed the ACT Assessment had the highest ACT score averages; 22.7 and 22.6, respectively. Students who indicated Social Sciences as their major had an ACT composite score average of 21.4, students indicating the Health Sciences averaged 20.9, and students declaring Education as their major averaged 20.8. All of those averages were above the UNO average. Undecided students had the lowest ACT Composite Scores of "majors" enrolling 40 or more students (20.3). There was a decline in the percentage of students enrolling at UNO who scored in the upper quadrant of the Act between 1989 and 1990 (8% versus 10%). The 1990 percentage was below the national average for all enrolled students (16%) and for MA degree granting institutions (11%). Slightly over 23% of the students who enrolled at UNO for the Fall Semester, 1990 had achieved an ACT Composite score at the 80th percentile or higher in contrast to 26% for the previous year.

Over 36% of the new freshmen self-reported that they were in the top quarter of their high school class. The ACT Composite score average for that group was 23.1 (versus 24.0 and 23.2, respectively for the national sample and MA level institutions). The high school grade average for these freshmen was 2.73 (5 year UNO average, 2.71) while the national sample and MA level institutions averages were 2.95 and 2.91, respectively. Over 42% of the new UNO freshmen indicated that they had achieved high school grade averages of 3.0 or higher (4.0 scale) while only 8% of the group indicated high school grade averages that were below 2.0 (both figures are 1-2% increases over 1989).

Figure 1
Comparison of Avg Scores



	ENGL	MATH	SOC SCI	NAT SCI	COMP
Nat'l All Freshmen	21.6	20.4	18.1	21.9	21.2
Nat'l MA Inst Avg	21.2	19.7	17.5	21.4	20.7
UNO Enrolled Frosh	20.7	19.7	17.8	21.5	20.7

Source: ACT Class Profile, 1990

ACT provides score comparisons between groups of students based upon their completion of a "CORE" of courses while in high school. This data is presented for both the Class Profile group and the Prediction Research group. The "CORE" consists of courses in English, Mathematics, Social Sciences, and Natural Sciences. The most stringent "CORE" consists of four years of English and Mathematics and three years of the Social and Natural Sciences. The least stringent of the four "COREs" provides for four years of high school English and two years of the other subjects (this is UNO's CORE level). There is a decline in ACT scores as there is a lessening in the level of the high school "CORE" that was completed! This is true for UNO students and at the state, regional and national levels. For example, UNO students who had completed the most stringent of the high school "CORE" programs (25% of the UNO students) presented an ACT Composite Score average of 22.4 while the ACT Composite score average for all UNO students with the least stringent of the ACT "COREs" was 21.0.

General Background — 49.6% of the UNO freshmen reported that they intended to obtain a Bachelor's degree. 41.6% indicated that they would aspire to graduate or professional degrees. 3.1% of the freshmen indicated degree aspirations of less than the bachelor's degree. Business Administration was the preferred major of 22.7%; Arts and Sciences (22.4%), and Health Sciences (12.4%). Eight percent of the students indicated that they were undecided regarding their major field of study. Majors in the college of Fine Arts, Engineering, Education, or Public Services were chosen by 4% and 8% of the freshmen, respectively.

Ninety percent of the freshmen were Caucasian (ACT = 21.0). Students of African-American heritage comprised 3.3% (ACT = 16.8). Mexican-American, Chicano, Puerto Rican and students of other Hispanic origins comprised 2.7% (ACT = 20.2). Asian-Americans comprised 2.2% (ACT = 20.0) and American Indian students comprised 0.5% of the group (ACT = 22.5). ACT Scores for the UNO African-American group were similar to those for the national MA level institutions. Scores for the American Indian, Mexican-American/Chicano and Puerto Rican groups were above the MA level institution averages while those for the Caucasian and Asian-American groups at UNO were below the MA institutions average. It is noteworthy that the percentages of students providing "No Response" to the ethnicity question has risen from 4% in 1986-87 to 8% in 1990-91. During that time, the Caucasian response percentage has varied between 83-84% and the ethnic minority percent has varied from 6-8%.

Over 85% of these UNO students indicated a preference for attending a public college or university while 11% indicated a desire to attend a private college. Thirty-three percent of these freshmen indicated a desire to attend a school with an enrollment of 10,000 or larger while 32% wanted to attend a school of 1-5,000 enrollment. Millard South high School was the single largest feeder school for this freshmen class (n = 106, 7.6%). The Omaha Public School District provided the largest number of students from the area school districts (n = 359, 25.7%); followed by the Millard School District (n = 196, 14.0%) and the Omaha Parochial School District (n = 165, 11.8%). Over 10% of this group came from Nebraska high schools outside of the four county metropolitan area while only 5% were from out-of-state high schools. UNO was the first or second choice college of 54% of these freshmen. That percentage is a slight decline from prior years. Nationally, the percentage of first or second choice of college for students who enrolled was 56%. Forty-one

percent of the freshmen who enrolled at UNO indicated that their preference was to attend a college within 25 miles of their present home; 19% indicated a preference for attending a college over 100 miles from their home.

Support Expectations — Large numbers of the entering freshmen indicated a need for special assistance in academic support areas. Over 45% said that they needed assistance in improving study skills. The ACT Composite for that group was 19.6; lower than for the total group of freshmen. Forty percent of the students indicated a need for assistance with mathematical skills (ACT Composite 19.0) while over 25% indicated special assistance needs in improving reading speed and comprehension (ACT Composite 19.0) and with expressing ideas in writing (ACT Composite 19.2). Forty-four percent indicated that they needed assistance with educational and occupational planning (ACT Composite 20.4). Finally, 13% indicated a special need for assistance with personal concerns. The percentages of UNO students expressing these special needs have remained constant over the past five years and are almost identical to special needs levels expressed by the national sample and by students at MA level institutions.

Entering UNO freshmen were interested in advanced placement programs. Between 17% and 22% of the freshmen expressed interest in advanced placement in English, mathematics, social studies, or natural sciences courses while 17% expressed interest in advanced placement in foreign language courses. The ACT score averages of these freshmen were above the UNO freshmen average (21.9 to 22.6). Thirty-six percent wanted to receive credit by examination in English, 30% in Social Studies, 22% in Natural Science and 30% in Mathematics. The ACT score averages for those students were from 21.1 to 21.5. Additionally, 36% of the freshmen were interested in independent study, 24% wanted to study in a foreign country, while 21% expressed an interest in freshmen honors courses.

Over three-fourths of the entering freshmen stated that they planned to apply for financial aid. Sixty-three percent planned to work while in college and wanted assistance finding employment. The ACT Composite scores of those groups was slightly above the UNO average. Of the new freshmen responding, 22% indicated that they would work 20 or more hours a week during their first year of college. Eleven percent indicated that they would not work during that first year while 15% and 48%, respectively, indicated that they would work 1-10 and 11-20 hours per week during their freshman year.

Conclusions — The UNO entering freshmen class for the Fall 1990 semester was a diverse group that possessed academic and personal characteristics much in line with those of students over the years. The UNO ACT Composite score was below the Nebraska average indicating that numbers of higher scoring freshmen continue to matriculate at institutions other than UNO. Freshmen who had ACT scores sent to UNO but who **did not enroll** at UNO expressed almost identical interest levels concerning advanced placement programs and credit by examination as did those who did enroll. That information could be used by the appropriate academic departments in the recruitment of those students — especially as the non-enrolling individuals score **above** the UNO ACT average.

Recommendations: ACT Class Profile —

1. Academic Departments should develop early contact with those students scoring in the upper half (22+ standard score) of the ACT. Early contact with high scoring ethnic minority group students is especially important in light of significant competition for such students.

2. UNO should expand retention strategies that include academic support services for students as well as programs to support part-time employment and other financial resource needs of students.

3. Further examination is needed of students who send ACT scores to UNO but choose initially not to attend. Of special interest are the large numbers who score 22-26 on the ACT (28% of non-enrolled). Many of these students might become transfer students for UNO at some later date.

4. The expressed needs for academic support services by the freshmen suggests the continued need for programs such as the Learning Center, Reading Laboratory, and the English and Mathematics placement examinations.

UNO/ACT PREDICTION RESEARCH

The second of the annual reports provided by the American College Testing Corporation is the **Prediction Research Report.** This report presents the university with data based upon the completion of an academic year by students who had enrolled at the university and who were represented in the previous **ACT Class Profile Report.** The importance of this report for UNO is the comparison of actual student performance with predictions based on test scores and high school grades. Further, the results of the predictive research are reported to prospective students indicating to them their chances for obtaining grades of "C" or better at UNO. Knowledge from predictive research is useful when advising current students with respect to their academic options based upon their ACT reported grades and test scores. **A clear caveat must be sounded.** *Many factors enter into the equation for success as a college student. The results of standardized tests and high school grades, while important, provide only part of the answer.*

General — The University of Nebraska at Omaha provides the American College Testing Corporation (ACT) with the names of new freshmen in the fall of each year; 1,354 for 1989. At the end of the same year, the university updates that list to include the actual course grades in four subjects and the students' overall grade average for their initial year. UNO currently submits grades in Freshman English 1150-1160; Algebra 1310-1314; Psychology 1010; and Biology 1020. These courses were chosen because of their relationship to the ACT subtests (English, Mathematics, Social Studies Reading, and Natural Sciences Reading) and that the enrollments in these courses across all subgroups provided

sufficient numbers for effective evaluation of data. While the numbers of students continue to be appropriate, the changes to the "Enhanced ACT" with a Reading sub-test replacing the Social Studies Readings sub-test will require a close evaluation of future course selections.

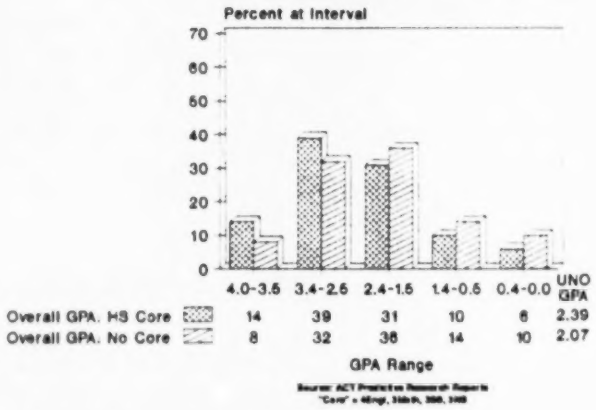
UNO designates nine sub-groups for evaluation in the present prediction research; Overall, Males, Females, Arts & Sciences, Business Administration, Education, Engineering & Technology, Fine Arts, and University Division. Continuing Studies, Home Economics, and Non Degree students are excluded due to the low numbers from those units who provide ACT scores. Results are given for each sub-group with an N of 50. Detailed results are reported to the Deans, the Chancellor and Vice Chancellors.

Prediction research focuses on three sets of data: the high school "CORE" course grades; Prediction Indices; and percentile ranks based on grades and ACT scores. Other information is available in the prediction research report. For example, it is possible to use an individual's ACT scores and high school grades to develop probabilities for success in courses. While these techniques can be quite useful for individual situations, that is beyond the scope of this report. Faculty with specific interests or areas of concern are urged to contact the Office of Student Development Services.

High School CORE Courses — For several years ACT has provided comparisons between students who have completed several levels of "CORE" courses while in high school. The courses are combinations of twenty-three courses such as 10th, 11th, and 12th grade English; Speech, Algebra, Geometry, Trigonometry, World History, U.S. History, Psychology, Biology, Chemistry, and Physics. ACT defines four levels of "CORE" courses from the most stringent (English = 4 years, Mathematics = 3 years, Social Studies = 3 years, and Natural Sciences = 3 years) to the least stringent (English = 4 years, Mathematics = 2 years, Social Studies = 2 years, and Natural Sciences = 2 years). Full admission at UNO is granted for those meeting the least stringent of the ACT defined categories. ACT scores at the local, state, regional, and national level clearly demonstrate a decline with the completion of less stringent sets of high school "CORE" requirements (ACT, 1991).

The results of students' endeavors during their initial year at UNO clearly bear out what is expected based on ACT scores. Results provided by ACT compared UNO students who had completed the second least stringent of the high school "CORE" levels (one level above the UNO minimum for full admission: 72% of UNO students) with those who had not. The overall UNO grade average of students who had completed the "CORE" was 2.39; for those who had not, 2.07. The differences as related to students' overall grade average are depicted at Figure 2. The results clearly show that students who had completed this high school "CORE" level were represented in the highest grade average level to a greater percentage than those who did not complete that "CORE" level. Also, students who had not completed that "CORE" were represented in greater percentages in the grade average categories below 1.5 than were those who had completed the "CORE". The relationships described above held, with minor exceptions, for all of the specific college course subject areas described in the predictive research.

Figure 2
UNO Student GPA by HS Preparation
Overall Grade Average



Differences between the percentages of men and women at the several score categories were evident. A larger percentage of women than men were in the higher grade average categories, regardless of high school "CORE" completed, and women had higher course and overall grade averages than men; also without regard for "CORE" category or level. For example, 19% of the men who had completed the high school "CORE" obtained a UNO overall grade average of less than 1.5 after their first year of college; only 12% of the women were in that category. In contrast, 28% of the men and 22% of the women who had not completed the high school "CORE" earned overall grade averages of less than 1.5 for their initial year at UNO. Forty nine percent of the men and fifty-eight percent of the women who had completed the high school "CORE" courses produced overall grade averages at the 2.5 or higher level. Only 35% of the men and 45% of the women without the high school "CORE" had 2.5 or higher grade averages.

Prediction Indices — The prediction indices are correlations designed to indicate the relationship between ACT Scores, High School Grades and the combination of these factors with the actual grades earned in specified college courses. The "T" index signifies the ACT test score/UNO course grade relationship; the "H" index the High School Grade/ UNO course grade relationship. The "TH" index is the correlation between the average of the grades predicted by the "T" index and the "H" index and the actual grades received. The "TH" index is considered the most powerful of the three and is the one focused on in this report. Correlations below .30 are considered by ACT to be of little, if any, use in prediction. Correlations in the .30-.40 range are of some use; those in the .40-.70 range of "average" use, and those in the .70-.80 range of "much use" (ACT, 1975).

The correlations have remained relatively stable over

long periods of time. Unfortunately, the correlations are in the low to average ranges. However, while lower than desired, they are useful. Little difference has been demonstrated between the correlations obtained for men and women — except in algebra where there are definite differences; women higher than men.

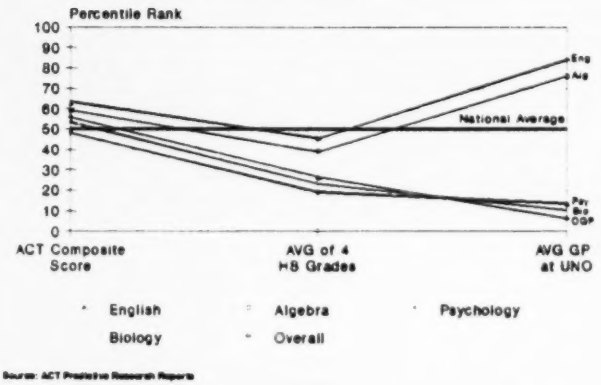
"TH" correlations for English and Algebra are the lowest of the five presented in the research. This has been consistent over the years. The .39 correlation for English and .43 for Algebra are in the low relationship category. They predict at a factor of 8% to 10% better than chance (using the **Index of Forecasting Efficiency**, $E=1-sqr1-R^2$). The **Coefficient of Determination**, R^2, for these two areas (.16 and .19, respectively) indicates that there is a large percentage of the variance in UNO English and Algebra grades that is not accounted for by the variance in high school grades or ACT scores. Some of those factors may be related to individuals' study habits and attitudes, the heterogeneity of the sample, and the working nature of the student body. The use of the English and Mathematics Placement examinations could be expected to impact on the correlations. That impact is not apparent.

The "TH" correlations for the Psychology 1010 course (.57), Biology 1020 course (.51), and the students' overall grade average (.58) are of a more encouraging nature. They are in the range which ACT refers to as of "average usefulness". The "efficiency index" for these three correlations suggests predictions of between 15% and 17% better than chance. *Sixty-nine to seventy-one percent of the variability in UNO grades for these areas is accounted for by factors other than high school grades and ACT scores.* UNO students' correlations for these areas are very similar to those of the national sample. Clearly, factors such as those indicated above, must be considered when predicting the grades of UNO students.

Grade/ACT Score Percentile Ranks — Comparing average ACT scores, high school grades and college grades received by the UNO students with other institutions (N = 594, Figure 3) provides a graphic depiction of the percentile ranks for UNO students during the past year. As with the other areas discussed, there has been stability in the percentile ranks for UNO students over the years (1987-88 appears as an aberration). Differences between the percentile ranks for men and women are quite noticeable.

UNO students in the prediction research sample were above the national average (50th percentile) in all ACT score areas except Biology, where they were just under the national average (English = 62nd percentile, Algebra = 59th percentile, Psychology = 54th percentile, Biology = 48th percentile, and Overall/Composite Score= 56th percentile). In this sample, men ranked at higher percentiles than women in every one of the ACT score categories (English, 73%ile-51%ile; Algebra, 64%ile-53%ile; Psychology, 65%ile-45%ile; Biology, 62%ile-37%ile; and Overall, 65%ile-45%ile). Those differences quickly pale to insignificance in the light of students' performance in high school and at UNO. The general observation that can be made, after the fact, from observation of these students ACT scores is that they appear capable of doing college level course.

Figure 3
ACT Composite, HS, and UNO Grades Compared to National Research Group



Source: ACT Predictive Research Reports

The high school grade averages earned by UNO students in the 4 course areas English, Mathematics, Social Sciences, Natural Sciences, and Overall high school grade average (based on self reported data as verified at UNO) place UNO students below the national average in all areas examined (English = 45th percentile, Mathematics = 39th percentile, Social Sciences = 25th percentile, Natural Sciences = 19th percentile, and Overall High School Average = 26th percentile). Women produced high school grades that ranked them much higher than their male counterparts (54%ile to 36%ile for English, 51%ile to 26%ile for Mathematics, 34%ile to 15%ile for Social Science, 30%ile to 10%ile for Natural Sciences and 34%ile to 18%ile for Overall High School Average). Except for the women's percentile ranks in English and Mathematics, all percentile ranks are below the national average.

The differences in the percentile ranks for ACT Scores and high school grades suggests that these students attended high schools where grading standards were somewhat rigorous, where students in general had well developed educational skills, where the schools emphasized intellectual development, and where large numbers of the graduates attend college (ACT, 1975). The differences between the ACT Scores and High School grades of the male sample members is significant; these men clearly did not perform to their potential. The percentile rank differences for women indicate that they performed in high school at about the levels to be expected.

The percentile ranks for students' grades during their initial year at UNO presents a varied picture. Overall, the students performed at very low levels compared to the national group (Psychology = 13th percentile; Biology = 13th percentile; and Overall Grade Average = 6th percentile). The difference between the students' ACT score percentile ranks and the percentile ranks for their UNO grades in those three areas is considered significant by ACT. While it might appear that something was wrong with the grading in the Psychology and Biology courses, such an assumption does not appear warranted in light of the students' overall grade

averages which take far more than one or two course offerings into account. ACT has suggested that one reason for the lower percentile ranks for UNO grades is that the university has difficult grading standards — overall and in specific courses. Men and women produce different results for the percentile ranks for their Psychology grades and overall grade average (women have a higher percentile rank than men) and had the same percentile rank for their Biology course grade average.

Percentile ranks for UNO students' grades in Psychology, Biology, and the Overall grade average move downward over time in comparison with the national sample. Yet the percentile ranks for the UNO grades of these same students moved higher in the English and Algebra courses (English = 84th percentile; Algebra = 76th percentile). Here too, there is a clear difference between the percentile ranks for men and women with women at the higher percentile ranks (English, men, 63%ile, women, 93%ile; Algebra, men 58%ile, women 88%ile). While the percentile ranks for their ACT scores and high school grades were slightly higher in English and Algebra than for Psychology, Biology, and Overall, there appears to be only one difference between the five areas measured. The Freshmen English courses and the Algebra courses require that students pretest/place into the courses! That may even account for the low correlations between the ACT Scores High School grades and the UNO grades in English and Mathematics ("TH" indices). Obviously something is happening as the English grade average was 2.89 for these students and the Algebra grade average was 2.52. In comparison, the Psychology grade average was 1.98, the Biology grade average was 2.01, and the overall grade average was 2.2.

Conclusions — Caution must be exercised in the use of ACT scores to predict the grades of students enrolling at UNO. The correlations obtained on the "TH" index do support the use of ACT scores, in conjunction with other measures, in the advising of students. The indications for academic progress suggested by students' ACT scores in conjunction with their completion of specified high school "CORE" courses is supported by data related to actual college grades. Students who had the "CORE" courses in high school get better college grades in their initial year than do those who did not. The performance of the students as indicated by their percentile ranks in English and Algebra courses suggests that the use of placement testing in these subjects is effective. It must be noted that all four courses are taught in different manners and that several factors influence grades other than students' basic/tested ability. The low percentile rank for overall grade average may by related to the failure of UNO students to develop efficient study habits during high school and in their initial year of college. Again, several other factors may impact on those results.

Recommendations —

1. Detailed examinations should be made to determine the impact of high school core course standards on the success of entering students. Of specific interest would be the persistence and continued enrollment of students who had completed the minimum high School "CORE" courses requirements for admission to UNO.

2. Further examinations of pre-selectivity into courses should be undertaken. Given the low overall grade average for these new freshmen, it would appear that skill needs exist which require attention.

3. UNO admission standards need to be examined in light of this data. Discussion could focus on selectivity versus open access.

References —

American College Testing Corporation (1991). **Class Profile Report, University of Nebraska at Omaha.** Iowa City, IA: The American College Testing Corporation.

American College Testing Corporation (1990). **Prediction Report, 1989-90 Freshmen (Summary Analysis), University of Nebraska at Omaha.** Iowa City, IA: The American College Testing Corporation.

American College Testing Corporation (1975). **Your College Freshmen, Interpretive Guide to ACT Research Services for Higher Education, 5th Edition.** Iowa City, IA: The American College Testing Corporation.

University of Nebraska at Omaha (1990, April). A. E. Crawford II. **ESS Reports, Vol III, No.1, "UNO Class Profile, 1989-90"**. Omaha, NE: Educational and Student Services, University of Nebraska at Omaha.

University of Nebraska at Omaha (1990, November, 7). **"Applications for Fall Semester 1990, Final Report"**. Office of Admissions, University of Nebraska at Omaha.

ESS Reports is published by the Division of Educational and Student Services, University of Nebraska at Omaha.

Delbert D. Weber, Chancellor

Richard E. Hoover, Vice Chancellor for Educational and Student Services

Joe L. Davis, Assistant Vice Chancellor for Educational and Student Services and Editor

University of Nebraska at Omaha

Educational and Student Services
University of Nebraska at Omaha